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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,661	09/10/2003	John Peter Roquemore III	11263.00	3687

26884 7590 11/26/2007

PAUL W. MARTIN
NCR CORPORATION, LAW DEPT.
1700 S. PATTERSON BLVD.
DAYTON, OH 45479-0001

EXAMINER	
AU, SCOTT D	

ART UNIT	PAPER NUMBER
2612	

MAIL DATE	DELIVERY MODE
11/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/659,661	ROQUEMORE, JOHN PETER	
	Examiner	Art Unit	
	Scott Au	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 January 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed on January 16, 2007 with respect to claim 1-16 have been fully considered but they are not persuasive.

In response to applicant's argument on page 9, that Dalton et al. in view of Matsushita and Ramamurthy et al. disclosure does not anticipate the amended claims of the present invention, is not persuasive.

Matsushita teaches the 2.4 GHz frequency-band reception section 124 receives 2.4 GHz frequency-band radio waves from the radio communication base station 16 via an antenna 123. Matsushita further teaches the 300 MHz frequency-band transmission section 126 transmits a 300 MHz frequency-band weak radio response via an antenna 125 to the radio relay station of the group to which this ESL belongs. Therefore, Matsushita teaches the transmitting and receiving are separated communication channels.

Rammaurthy et al. teach the reader (40) transmitting and receiving simultaneously with radio module (44) (col. 5 lines 10-38). Therefore, Rammaurthy et al. teach the receiving and transmitting signals are overlapping each other at hybrid (44c) simultaneously.

Specification

The disclosure is objected to because of the following informalities: On page 8 of the remarks, the Application NO. 10/656,779 does not match with the with the appropriate Application NO. 10/659,661.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalton et al. (US# 6,419,154) in view of Matsushita (US# 6,762,674) and further in view of Ramamurthy et al. (US# 6,853,294).

Referring to claim 1, Dalton et al. disclose an electronic shelf label system comprising:

a base station (120) (i.e. relay unit) including first wireless downlink communication circuitry (304) (i.e. transmitter circuitry of relay unit 120) and first

wireless uplink communication circuitry (205) (i.e. transmitter circuitry of tag 122); and plurality of electronic shelf labels, each electronic shelf label including second wireless downlink communication circuitry(206) (i.e. receiver circuitry of tag 122) for receiving messages from first wireless downlink communication circuitry of the base station (120) (i.e. relay unit), and second wireless uplink communication circuitry (312) (i.e. receiver circuitry of relay unit 120) for sending messages to first wireless uplink communication circuitry of the base station (120) (i.e. relay unit) (col. 3 lines 17-65; see Figures 1-3).

However, Dalton et al. did not explicitly disclose the first wireless uplink operating in a different mode than the first wireless downlink communication circuitry and wherein the base station operates to concurrently transmit a first message to a first electronic shelf label overlapping receive a second message from the second electronic shelf over separate communication channels.

In the same field of endeavor of inventory system, Matsushita suggests the first wireless uplink operating in a different mode than the first wireless downlink communication circuitry over separated communication channels (i.e. different mode operation of transmitting and receiving at different frequency on separated channel, col. 5 lines 16-23; see Figure 5).

One ordinary skill in the art understands that different mode operation of transmitting and receiving at different frequency of Matsushita is desirable in the inventory system of Dalton et al. suggest the electronic shelf label systems of having the downlink communications path is separate from and may employ different technology than the uplink communication path (col. 1 line 29-38) and Matsushita

suggests the electronic shelf label systems wherein the tag transmitting section is operated at a lower frequency of 300 Mhz and the receiving section is received at the frequency band of 2.4GHz over separated channels (col. 5 lines 16-67). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include different mode operation of transmitting and receiving at different frequency of Matsushita in the inventory system of Dalton et al. with the motivation for doing so would allow the longer life of the battery of the tag.

However, Dalton et al. in view Matsushita did not explicitly disclose wherein the base station operates to concurrently transmit a first message to a first electronic shelf label overlapping receive a second message from the second electronic shelf.

In the same field of endeavor of RF communication system, Ramamurthy et al. teach wherein the RFID reader (40) employs with concurrent transmitting and receiving communications mode and the signals are overlapping (col. 5 lines 10-38; see Figure 2).

One ordinary skill in the art understands that having RFID reader (40) operates transmitting and receiving simultaneously from the tags is desirable in the inventory system of Dalton et al. in view of Matsushita because Dalton et al. suggest the communication transmitting link 126 and receiving link 127 between base station 120 (i.e. relay unit) and the ESLs 122 (col. 3 lines 1-17) and Ramamurthy et al. teach the reader (40) transmitting and receiving data from the tags simultaneously and overlapping (col. 5 lines 34-38). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include simultaneously

transmitting and receiving data function of Ramamurthy et al. in the inventory system of Dalton et al. in view of Matsushita with the motivation for doing so would increase the operation speed.

Referring to claim 2, Dalton et al. in view of Matsushita and Ramamurthy et al. disclose the system of claim 1, Dalton et al. disclose further comprising a computer (102) (i.e. host computer) coupled to the base station (120) (i.e. relay unit) via a cable for sending messages to the electronic shelf labels via the first and second wireless downlink communication circuitries, and for receiving messages from the electronic shelf label via the first and second wireless uplink communication circuitries (col. 2 line 64 to col. 3 line 8).

Referring to claim 3, Dalton et al. in view of Matsushita and Ramamurthy et al. disclose the system of claim 1, Matsushita discloses wherein the first and second wireless downlink communication circuitries communicate at a first frequency and the first and second wireless uplink communication circuitries communicate at a second frequency different than the first frequency (col. 5 lines 16-67; see Figure 5).

Referring to claim 4, Dalton et al. in view of Matsushita and Ramamurthy et al. disclose the system of claim 1, Matsushita discloses wherein the first and second wireless downlink communication circuitries communicate in a first communication band and the first and second wireless uplink communication circuitries communicate

in a second communication band different than the first communication band (col. 5 lines 16-67; see Figure 5).

Referring to claim 5, Dalton et al. in view of Matsushita and Ramamurthy et al. disclose the system of claim 1, Matsushita discloses wherein the first and second wireless downlink communication circuitries communicate at a frequency of about 2.4 GHz (col. 5 lines 16-67; see Figure 5) and Dalton et al. disclose the first and second wireless uplink communication circuitries communicate at an infrared frequency (col. 2 line 64 to col. 3 line 8).

Referring to claim 6, Dalton et al. in view of Matsushita and Ramamurthy et al. disclose the system of claim 1, Matsushita discloses wherein the first and second wireless downlink communication circuitries communicate at a frequency of about 2.4 GHZ (col. 5 lines 16-67; see Figure 5) and it is conventional in the art for one ordinary skill to use inductance coupling a communication path between devices.

Referring to claim 7, Dalton et al. in view of Matsushita and Ramamurthy et al. disclose the system of claim 1, Matsushita discloses wherein the first and second wireless downlink communication circuitries communicate at a first frequency of about 2.4 GHz and the first and second wireless uplink communication circuitries communicate at a second frequency substantially lower than the first frequency (col. 5 lines 16-67).

Referring to claim 8, Dalton et al. in view of Matsushita and Ramamurthy et al. disclose the system of claim 7, Matsushita discloses wherein the second frequency is at 300 MHz which is closed about 400 MHz. Therefore, it is obvious for one ordinary skill in the art to understand that the transmitted signal from the tag is weaker than the received signal and is upon an individual to set the frequency band that best fit the transmission from the tag.

Claims 10-11 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalton et al. (US# 6,419,154) in view of Matsushita (US# 6,762,674) and further in view of Neumark (US# 6,736,316).

Referring to claim 10, Dalton et al. disclose a method of communication between a base station (120) (i.e. relay unit) and a plurality of electronic shelf labels comprising of:

wirelessly sending a first message in a first time period to a first electronic shelf label utilizing first downlink communication circuitry (304) (i.e. transmitter circuitry of relay unit 120) in the base station (120) (i.e. relay unit);

receiving the message utilizing second downlink communication circuitry (206) (i.e. receiver circuitry of tag 122) in first electronic shelf label (i.e. tag 122);

wirelessly sending a response to the base station in a second time period to the first uplink communication circuitry (205) (i.e. transmitter circuitry of tag 122) in the electronic shelf label;

receiving the response in a second time period from the first electronic shelf label utilizing second uplink communication circuitry (312) (i.e. receiver circuitry of relay unit 120) in the base station (120) (i.e. relay unit); and

wirelessly sending a second message during the second time period to a second electronic shelf label utilizing the first downlink communication circuitry in the base station (120) (i.e. relay unit) (col. 3 lines 17-65; see Figures 1-3).

However, Dalton et al. did not explicitly disclose a method of a duplex data communication between a base station and a plurality of electronic shelf labels and the base station using a different mode of communication over a different communication channels.

In the same field of endeavor of inventory system, Matsushita suggests the base station using a different mode of communication over different communication channels (i.e. different mode operation of transmitting and receiving at different frequency, col. 5 lines 16-23; see Figure 5).

One ordinary skill in the art understands that different mode operation of transmitting and receiving at different frequency of Matsushita is desirable in the inventory system of Dalton et al. suggest the electronic shelf label systems of having the downlink communications path is separate from and may employ different technology than the uplink communication path (col. 1 line 29-38) and Matsushita

suggests the electronic shelf label systems wherein the tag transmitting section is operated at a lower frequency of 300 Mhz and the receiving section is received at the frequency band of 2.4GHz over different communication channels (col. 5 lines 16-67). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include different mode operation of transmitting and receiving at different frequency over different communication channels of Matsushita in the inventory system of Dalton et al. with the motivation for doing so would allow the longer life of the battery of the tag.

However, Dalton et al. in view Matsushita did not explicitly disclose a method of a duplex data communication between a base station and a plurality of electronic shelf labels.

In the same field of endeavor of inventory system, Neumark discloses a method of having a full duplex electronic labeling system and is an advantageously employed in stores and retail establishments (col. 4 lines 22-39).

One ordinary skill in the art understands that having a full duplex electronic labeling system of Neumark is desirable in the inventory system of Dalton et al. in view of Matsushita because Dalton et al. suggest the communication transmitting link 126 and receiving link 127 between base station 120 (i.e. relay unit) and the ESLs 122 (col. 3 lines 1-17) and Neumark teaches a duplex communication method in the electronic labeling system is advantageously employed in stores and retail establishments.

Referring to claim 11, Dalton et al. in view of Matsushita and Neumark disclose the method of claim 10 above, Dalton et al. disclose the steps of:

sending the message to the base station through a cable by a computer; and receiving the response through the cable by the computer (col. 2 line 64 to col. 3 line 8).

Referring to claim 13, Dalton et al. in view of Matsushita and Neumark disclose the method of claim 10 above, Matsushita disclose wherein the first and second wireless downlink communication circuitries communication at a first frequency and the first and second wireless uplink circuitries communicate at a second frequency different than the first frequency (col. 5 lines 16-67; see Figure 5).

Referring to claim 14, Dalton et al. in view of Matsushita and Neumark disclose the method of claim 13 above, Matsushita discloses wherein the first frequency is approximately 2.4 GHz (col. 5 lines 16-67; see Figure 5).

Referring to claim 15, Dalton et al. in view of Matsushita and Neumark disclose the method of claim 13 above, Matsushita discloses wherein the second frequency is at 300 MHz which is closed about 400 MHz. Therefore, it is obvious for one ordinary skill in the art to understand that the transmitted signal from the tag is weaker than the received signal and is upon an individual to set the frequency band that best fit the transmission from the tag.

Referring to claim 16, Dalton et al. in view of Matsushita and Neumark disclose the method of claim 13 above, Dalton et al. disclose wherein the second frequency is an infrared frequency (col. 3 lines 1-9).

Claims 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalton et al. (US# 6,419,154) in view of Matsushita (US# 6,762,674) and further in view of Neumark (US# 6,736,316) and Ramamurthy et al. (US# 6,853,294).

Referring to claims 9 and 12, Dalton et al. in view of Matsushita, Ramamurthy et al. and Neumark disclose the electronic shelf label system, to the extent as claimed with respect to claims 1 and 10 above, and the system and method further including: the first wireless uplink communication circuitry operating at a substantially lower frequency than the first wireless downlink communication circuitry (col. 5 lines 15-67, Matsushita); and a computer (102) (i.e. host computer) coupled to the base station (120) (i.e. relay unit) via a cable for sending messages to the electronic shelf label via the first and second wireless downlink communication circuitries, and for receiving messages from the electronic shelf label via the first and second wireless uplink communication circuitries (col. 2 line 64 to col. 3 line 8, see Dalton et al.).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications form the examiner should be directed to Scott Au whose telephone number is (571) 272-3063. The examiner can normally be reached on Mon-Fri, 8:30AM – 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman can be reached at (571) 272-3059. The fax phone numbers for the organization where this application or proceeding is assigned are (571)-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-305-3900.

Scott Au

BRIAN ZIMMERMAN
SUPERVISORY PATENT EXAMINER